

Application No. 10/661,662
Declaration under 37 C.F.R. § 1.132
Docket No.: 242866US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF

GROUP: 1765

Nobuhiko IZUTA, et al.

SERIAL NO.: 10/661,662

EXAMINER: S. AHMED

FILED: September 15, 2003

FOR: REGENERATION PROCESS OF ETCHING SOLUTION, ETCHING
PROCESS, AND ETCHING SYSTEM

DECLARATION UNDER 37 C.F.R. § 1.132

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

Sir:

Now comes Nobuhiko Izuta who deposes and states that:

1. I am a graduate of Yamagata University and received my engineering research master's degree in the year 1996.
2. I have been employed by M·FSI LTD. for 3 years as an Engineer in the field of Semiconductor manufacturing process.
3. The following statements and calculations are my own:

The phosphoric acid in a phosphoric acid solution can be determined by the boiling point of the solution. Thus, when US 6,399,517('517) describes, for example, at column 1, lines 20-21 and line 28, that the boiling point of the aqueous phosphoric acid solution is 160-180°C, the phosphoric acid content of the solution is 87 to 92 wt %.

Using data from page 676 of the "Supplement to Mellor's comprehensive treatise on Inorganic and Theoretical Chemistry," Vol. VIII, Supplement III, Longman 1971, which is attached to this paper, I have made the following Table 1:

Table 1: Boiling Point v. Wt % Phosphoric Acid

Boiling Point (°C)	Wt % Phosphoric Acid
154.2	85
161.6	87.9
177.6	91.3
187.8	92.4
192.6	94.6
205.1	95.3

Graphing this data on a curve (Graph 1), and selecting the data points for 160°C, 170°C, and 180°C, yields Table 2:

Graph 1: Boiling Point v. Wt % Phosphoric Acid

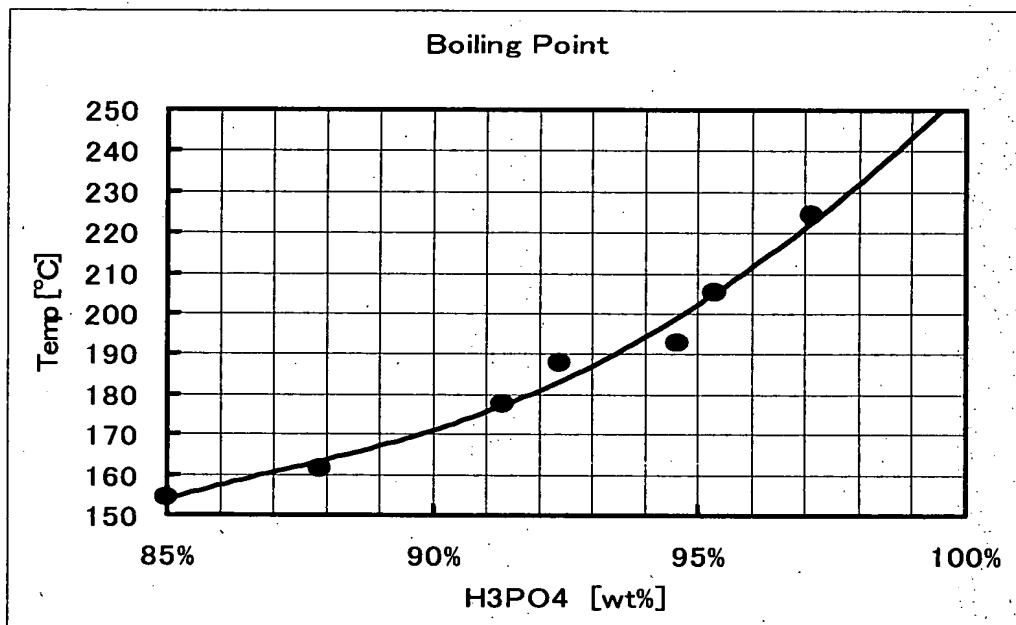


Table 2: Boiling Point (°C) v. Wt % Phosphoric Acid in Solution

Boiling Point (°C)	Wt % Phosphoric Acid
160	87
170	90
180	92

Thus, for the phosphoric acid solution of '517, that boils between 160 and 180°C, the phosphoric acid concentration in the solution (i.e., wt % phosphoric acid) is between 87 wt % and 92 wt %. Thus, a boiling point of 160 to 180°C, and a phosphoric acid wt %

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of 87.92 wt %, are physical values of the etch solution of '517 prior to evaporation of water from the boiling.

4. The undersigned petitioner declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punished by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

5. Further deponent saith not.

Hobuhiko Izuta

Signature

Dec. 14, 2006

Date

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